

with coloured amendments

12

CLAIMS

1. ~~A composite~~ Composite material, characterized in that it comprises two or more components of which one is super-porous polysaccharide (main component) which outside the superpores 5 contains a gel phase with micro-pores and the other component(s) (secondary component(s)) are different from the main component with exception of the case that the composite contains an electrically monolithic secondary component which is intended to be, or is, connected between two electrodes.

10 2. ~~The Composite~~ The Composite material according to claim 1, characterized in that the main component is in the shape of discrete particles or a continuous structure.

3. ~~The Composite~~ ^{Claim 1} The Composite material according to any of claims 1-2, characterized in that at least one of the secondary components is outside the super-pores but inside the main component's gel 15 phase.

4. ~~The Composite~~ ^{Claim 1} The Composite material according to any of claims 1-2, characterized in that at least one of the secondary components is in the super-pores of the main components.

20 5. ~~The Composite~~ ^{Claim 1} The Composite material according to any of claims 1-2, characterized in that at least one of the secondary components is found present in both the super-pores and in the gel phase of the main component.

6. ~~The Composite~~ ^{Claim 1} The Composite according to any of claims 1-5, characterized in that it has at least one 25 affinity ligand.

7. ~~The Composite~~ The Composite material according to claim 6, characterized in that the respective affinity ligand is linked to the main component and/or to one or more secondary components.

30 8. ~~The Composite~~ The Composite material according to claim 6, characterized in that at least one of the affinity ligands is linked to the main component.

9. ~~The Composite~~ The Composite material according to claim 6, characterized in that at least one of the affinity ligands is connected to one of the secondary components.

with coloured amendments

13

10. ~~The Composite~~ ^{Claim 6} material according to ~~any of claims 6-9~~, characterized in that said at least one of the affinity ligands is an ion exchange group, amphoteric group, chelating group, bio-affine group, a group which can be used in covalent chromatography, a group which gives π - π -interaction, a group which can be used during hydrophobic interactions chromatography, a 5 group which give thiophilic interactions, or an affinity binding inorganic material which is a secondary component, such as hydroxyapatite, etc.

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11. ~~The Composite~~ ^{Claim 1} material according to any of claims 1-10, characterized in that the secondary components are porous with average pore diameters which are greater than the 10 average pore diameters in the gel phase of the main component.

12. ~~The Composite~~ ^{Claim 1} material according to ~~any of claims 1-11~~, characterized in that it is in the shape of fibres, beads, or a monolith, such as a membrane or a bed.

15 13. ~~4~~ ^{Claim 1} The use of the composite material according to ~~any of claims 1-11~~ in separations, the culturing of cells, chemical synthesis, enzymatic/catalytic reactions.

Add A2